

DOCKET NO.: BTG0004-100 (141183US01)**PATENT****In the Claims:**

The current status of all claims is listed below and supercedes all previous lists of claims.

Please cancel claims 7-11 and 25-46 without prejudice to their presentation in another application, and amend claims 12, 22, and 47 as follows:

1. (previously presented) A method of controlling one or more of plant growth, gene expression, cellular DNA replication, cell cycle progression, differentiation and development comprising increasing or decreasing E2F-dimerization partner (DP) protein activity in a plant cell through expression of a recombinant DP peptide or protein in the plant cell, wherein the peptide or protein comprises SEQ ID No 2, a functional part thereof, or a sequence having at least 70% homology to either, wherein the peptide or protein is capable of interacting with a plant E2F protein or peptide to alter E2F activity in the plant cell.
2. (previously presented) The method of Claim 1 wherein the peptide or protein sequence is of 50% or more identity with that of the corresponding full length or part of SEQ ID No 2.
3. (previously presented) The method of Claim 1 wherein the peptide or protein sequence is of 70% or more identity with that of the corresponding full length or part of SEQ ID No 2.
4. (previously presented) The method of Claim 1 wherein the plant DP activity comprises one or both of (i) the ability to dimerize with plant E2F protein and (ii) the ability to modulate E2F binding to E2F/DP transcription factor binding sites in plant DNA.
5. (previously presented) The method of Claim 1 further comprising the steps of altering the plant DP protein level, the E2F-DP DNA-binding activity, transactivation properties, and/or DP/E2F-binding activity.

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6. (previously presented) The method of Claim 1 wherein the DP may be modified alone and/or in combination with a modification of the levels or activity of plant E2F and/or plant Rb.

7-11. (cancelled).

12. (currently amended) An isolated, enriched, cell free and/or recombinant nucleic acid comprising a sequence encoding for expression of a protein or peptide of Claim 7 capable of altering E2F-dimerization partner (DP) activity in a plant cell comprising one or both DP activities in plants selected from (i) the ability to dimerize with plant E2F protein and (ii) the ability to modulate E2F binding to E2F transcription factor binding sites in plant DNA or effect thereof, wherein the protein or peptide comprises SEQ ID No 2 or a functionally active part thereof or a sequence having at least 70% homology to such sequence or part.

13. (previously presented) The nucleic acid of Claim 12 comprising the coding nucleic acid sequence of SEQ ID No 1 or a part thereof encoding for all or a functional part of the amino acid sequence shown therein.

14. (previously presented) The nucleic acid of Claim 12 wherein the nucleic acid is contained in plasmid pCLON33, deposit number CECT 5195 made on August 17, 1999.

15. (previously presented) The nucleic acid of Claim 12 wherein the nucleic acid encodes a plant DP or a functional variant thereof and comprises SEQ ID No 1, a sequence complementary to SEQ ID No 1, or a sequence that is antisense to SEQ ID No 1.

16. (previously presented) A nucleic acid probe comprising a DNA sequence which encodes an amino acid sequence selected from the group consisting of SEQ ID No 2, SEQ ID No 4, SEQ ID No 6, and SEQ ID No 8.

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17. (previously presented) A nucleic acid probe or primer comprising a double or single stranded DNA sequence comprising 10 or more contiguous nucleotides of SEQ ID No 1 with the proviso that the ten or more contiguous nucleotides are not selected from nucleotides encoding amino acids 70 to 136.

18. (previously presented) An oligonucleotide probe comprising at least 18 contiguous bases of SEQ ID No 1.

19. (previously presented) The oligonucleotide probe of Claim 18 comprising 30 to 100 bases.

20. (previously presented) The oligonucleotide primer of Claim 17 comprising 10 to 20 bases.

21. (previously presented) A DNA which is antisense to a nucleic acid of claim 12.

22. (currently amended) A nucleic acid encoding the a DP protein or peptide ~~encoding sequence of Claim 7~~ with a sequence encoding an E2F protein or peptide, wherein the DP protein or peptide is capable of altering E2F-dimerization partner (DP) activity in a plant cell comprising one or both DP activities in plants selected from (i) the ability to dimerize with plant E2F protein and (ii) the ability to modulate E2F binding to E2F transcription factor binding sites in plant DNA or effect thereof, wherein the DP protein or peptide comprises SEQ ID No 2 or a functionally active part thereof or a sequence having at least 70% homology to such sequence or part.

23. (previously presented) The nucleic acid of Claim 22 wherein the sequences encoding the DP and E2F are under control of the same regulatory element or elements.

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24. (previously presented) A nucleic acid vector or construct comprising a nucleic acid of Claim 12 or antisense nucleic acid thereto.

25-46. (cancelled).

47. (currently amended) A nucleic acid encoding a DP peptide or protein of Claim 7 fused to a sequence encoding a protein label, wherein the DP protein or peptide is capable of altering E2F-dimerization partner (DP) activity in a plant cell comprising one or both DP activities in plants selected from (i) the ability to dimerize with plant E2F protein and (ii) the ability to modulate E2F binding to E2F transcription factor binding sites in plant DNA or effect thereof wherein the DP protein or peptide comprises SEQ ID No 2 or a functionally active part thereof or a sequence having at least 70% homology to such sequence or part.